

## **Historic, Archive Document**

Do not assume content reflects current scientific knowledge, policies, or practices.



166.3  
M68  
no.33

cop. 2

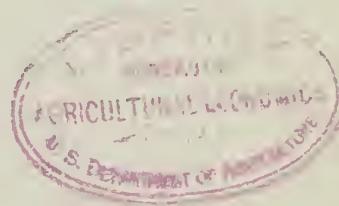
FARM CREDIT ADMINISTRATION  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WASHINGTON, D. C.

DISTRIBUTION OF CANNED FOODS  
BY COOPERATIVE CANNERRIES  
IN THE UNITED STATES

Preliminary Report

166.3  
M68  
no.33  
MAR 11 1941

By  
HARRY C. HENSLEY



COOPERATIVE RESEARCH AND SERVICE DIVISION

Miscellaneous Report No. 33

January 1941

INV. '68

FARM CREDIT ADMINISTRATION

A. G. Black - Governor

COOPERATIVE RESEARCH AND SERVICE DIVISION

T. G. Stitts - Chief

W. W. Fetrow - Associate Chief

DISTRIBUTION OF CANNED FOODS BY COOPERATIVE CANNERRIES  
IN THE UNITED STATES

By Harry C. Hensley  
Senior Agricultural Economist, Cooperative Research  
and Service Division

CONTENTS

	<u>Page</u>
Summary	1
Reasons for study	3
Characteristics of the associations	4
Storage	7
Insuring stocks in storage	9
Financing stocks in storage	10
Sources of loans	10
Rate of advance	12
Type of lien	13
Margin of collateral	13
Repayment and release of collateral	14
Acceleration of sale	15
Channels of distribution	16
Use of brokers	16
Wholesale channels	19
Credit to buyers	21
Transportation	24
Geographic distribution of sales	27
Effect of location on distribution of sales	27
Effect of size on distribution of sales	31
Distribution of sales by commodity groups	31
Citrus juice	32
Fruits	34
Vegetables	34
Fruits and vegetables	36
Dairy and poultry products	37
Future sales and seasonal dollar billings	38
Citrus juices	40
Fruits	40
Fruits and vegetables	42
Vegetables	44
Seasonal billings as related to volume	44
Appendix	48

NOTE.— The author desires to express appreciation to officials of the cooperatives who gave generously of their time in supplying data, to Anne L. Gessner, Cooperative Research and Service Division, for the statistical work, and to D. B. DeLoach and C. W. Peters, Oregon State College, who assisted in the field work in Oregon. Suggestions and assistance were also received from members of the Cooperative Research and Service Division staff, including K. B. Gardner, A. W. McKay, and N. Fogelberg.



## SUMMARY

Important changes in the distribution of canned foods in the United States during the last decade have been accompanied by variations in methods of storing, insuring, financing, transporting, and merchandising practices of farmers' cooperative canneries. This preliminary report, which is based on a study of the sales methods and policies of 37 cooperative canneries representing a sample of approximately 50 percent of the larger organizations, shows the pattern of distribution for their products during the period 1936 to 1940.

The canneries surveyed were located principally near the border of the United States where transportation by water was readily available. The group studied contained 9 associations, each with annual sales of more than a million dollars, 14 associations with sales of \$250,001 to a million dollars, and 14 associations with sales of \$250,000 or less.

By commodity groups, there were 4 canneries packing dairy and poultry products, 7 packing vegetables, 7 packing fruits, 7 packing fruits and vegetables, and 12 packing products classified as specialties. The commodities packed by the group included almost the entire line of commodities packed by private canneries in the United States.

As a rule, the cooperatives own sufficient storage space to meet local storage requirements under usual operating conditions. A majority of the associations sometimes use general merchandise warehouse facilities for storing spot stocks from which to make prompt delivery to customers in the large centers and surrounding territory.

Practically all associations carry fire insurance on canned products in storage and are protected to a lesser extent against losses from wind, water, and earthquake. Many associations also carry some form of product liability insurance, the purpose of which is to protect the insured from loss due to injuries or damages arising from use of the product. Fifty-eight percent of the associations financed their packs in storage through the banks for cooperatives. Other banks financed 19 percent, while 14 percent were financed jointly by the banks for cooperatives and other banks. Interest rates on loans primarily secured by canned goods in storage ranged from somewhat more than 1 percent to more than 5 percent, with 43 percent of the associations paying rates of 1.1 to 2 percent.

In about three-fourths of the cases, warehouse receipts were used as collateral for the loan. Sixty-eight percent of the associations had loans on which advances were made at from 61 to 70 percent of the net market value.

The usual distribution channels include the food broker, the wholesale grocer or chain store, and the retail food store.

Although field brokers, who operate in the field as the economic link between a number of small canners and wholesale buyers, are used by all groups except the dairy and poultry group, the use of such brokers is decreasing.

The independent wholesale grocer is the cooperatives' chief customer. More than 80 percent of their sales for the 1938-39 season were made to wholesale grocers and only about 15 percent to corporate chains. The percentage of sales made by individual canneries to corporate chains ranged from none to 63.

Credit is extended to buyers by about 71 percent of the associations reporting; about one-fourth do not extend credit. Sixteen associations reported that from 76 to 100 percent of their business was done on credit. Credit losses varied from nothing to approximately one-half of 1 percent of sales, with about one-half of the associations reporting no credit losses.

Most of the associations made shipments by rail, water, and motortruck. Two associations made no rail shipments, seven did not ship by water, and three did not ship by motortruck. Two associations made over three-fourths of their shipments predominantly by rail, one by water, and six by motortruck. Rail shipments by most associations moved in carloads.

Numerous associations are getting national distribution of their products. For the 1938-39 season, 24 cooperatives with domestic sales of \$14,690,013 were distributing about one-third of their pack in the New England and Middle Atlantic States. These geographic areas included about 36 percent of the national income paid out in 1939 and 27 percent of the United States population. These cooperatives distributed about one-third of their pack in the Pacific States, though this area received only about 10 percent of the national income and had about 7.4 percent of the population.

The geographic location of the cooperative is an important factor in determining the distribution pattern for its products. Associations located at interior points where water transportation is not available generally have a more restricted distribution than those located where water transportation is available.

There is a tendency for the smaller associations to have fewer brokers and customers and to distribute a larger percentage of the products near the factory.

About 60 percent of citrus-juice sales for the 1938-39 season, by four cooperatives whose domestic sales were \$2,112,786, were in the Middle Atlantic, East North Central, and New England States. These three sections received about 58 percent of the national income payments in 1939. This area was also the principal market for eight associations packing primarily canned fruits, five of which were located in the Pacific States.

Four associations in the Pacific States packing fruits and vegetables, whose domestic sales in 1938-39 were \$4,080,255, were getting good national distribution. Three dairy and poultry cooperatives in the Pacific States each made from half to 97 percent of their domestic sales in the Pacific States.

Seasonal billings of citrus juices by five associations in 1939 were greatest in May, June, July, and August, with monthly billings ranging from 10.5 to 1<sup>1</sup>/<sub>4</sub> percent of the 12 months' total. Shipments were lowest in November, with less than 3 percent of the total for the year.

Seasonal billings of eight fruit associations were greatest from February to July and lowest in December and January.

Fruit and vegetable canneries had a higher seasonal movement during August, September, and October at the close of their principal packing season.

Seasonal billings of vegetable canneries have usually been heaviest immediately following the packing season.

Canneries with large volume tend to distribute their shipments more evenly throughout the marketing season than canneries with small volume.

#### REASONS FOR STUDY

Important changes have occurred in the distribution of canned foods during the last decade. These changes have been accompanied by variations in methods of financing, storing, transporting, and merchandising practices. This preliminary report shows the distribution pattern for a number of cooperative canneries based on their experiences during the period 1936 to 1940.

The report, based on part of a study of the sales methods and policies of cooperative canneries in the United States, is intended to be of assistance to (1) officials and members of cooperative canneries, (2) banks for cooperatives and other institutions financing cooperative canneries, and (3) educational institutions and those considering the organization of new cooperative canneries or the reorganization of existing canneries.

The information upon which this study is based was obtained by personal interviews with officials of 37 cooperative canneries during the 1939-40 marketing season. Sales data were obtained either from officials of the cooperatives on forms prepared by those in charge of the study or directly from the records of the associations by representatives of this division. The canneries were selected largely with a view to studying the experiences of representative associations, giving due consideration to location, marketing experience, commodities packed, and availability of the data sought.

During the course of the study the information obtained from cooperative canneries was supplemented by information obtained through personal interviews with brokers representing the cooperatives in the principal markets of the United States. The viewpoint of wholesale-grocer and chain-store buyers aided greatly in the interpretation of information developed in the study.

The sample represented in this survey is approximately 50 percent of the larger cooperative canneries which were in operation at the time the records were taken and 30 percent of all the cooperative canneries then operating in the United States. Since it was not always practical to secure comparable data from each of the associations for all the schedules used in the survey forms or for the same time periods for all associations, care has been taken to show in each table the number of associations supplying data.

From the standpoint of distribution practices, it is believed that the study fairly represents the practices generally followed when viewed from either the standpoint of commodities handled or the geographic area in which the plants are located. However, the sample is weighted more heavily with associations packing large volumes.

#### CHARACTERISTICS OF THE ASSOCIATIONS

The cooperative canneries included in this study, as a rule, are comparatively young organizations. Eleven of the organizations were less than 5 years of age (table 1). Fourteen associations were from 5 to 10 years old. Only 3 were more than 20 years old. Some associations, however, prior to their reorganization as cooperatives, had functioned as private canneries.

Table 1.- Age of Associations

Years	Number of associations handling -					Total
	Dairy and poultry products	Vegetables	Fruits	Fruits and vegetables	Specialties	
Less than 5	-	3	1	1	6	11
5 - 10	1	4	1	3	5	14
11 - 15	2	-	1	1	1	5
16 - 20	1	-	2	1	-	4
21 - 25	-	-	1	-	-	1
26 - 30	-	-	-	-	-	0
Over 30	-	-	1	1	-	2
Total	4	7	7	7	12	37

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Classified by commodity types, 4 associations were packing dairy and poultry products, 7 associations were packing vegetables, 7 were packing fruits, and 7 were packing both fruits and vegetables. There were 12 associations packing products usually classified as specialties. Under this classification were grouped organizations packing primarily such products as fruit and vegetable juices, mushrooms, syrup, and cranberries. At times, reclassification of the specialty group was desirable. For example, in some tables citrus juices were grouped together and cranberries were included with fruits. The commodities packed by the cooperatives include almost the entire line of commodities packed by private canneries in the United States. A few of the commodities are shown in figure 1.

According to dollar volume of sales, 9 associations had sales of more than a million dollars each (table 2). Fourteen associations reported sales of 250 thousand dollars or less. Among the larger associations were 2 canning evaporated milk, 4 canning both fruits and vegetables, and 3 handling specialties.

Table 2.- Sales by 37 Cooperative Canning Associations, 1938-39

Value of sales	Number of associations handling -					
	Dairy and poultry products	Vege-tables	Fruits	Fruits and vegetables	Specialties	Total
\$1 - \$250,000	-	5	3	1	5	14
\$250,001 - \$500,000	-	1	1	2	2	6
\$500,001 - \$750,000	2	1	1	-	2	6
\$750,001 - \$1,000,000	-	-	2	-	-	2
Over \$1,000,000	2	-	-	4	3	9
Total	4	7	7	7	12	37

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

When grouped according to number of cases packed, there were 10 associations that packed 100,000 cases or less (table 3). Three associations packed over a million cases each. Of these, 1 packed both fruits and vegetables, while 2 packed specialties. Among the associations with the smaller packs were 7 associations packing primarily vegetables and 7 packing mostly fruits.

Table 3.- Cases Packed by 34 Associations, 1938-39 1/

Cases packed	Number of associations handling -					
	Dairy and poultry products	Vege-tables	Fruits	Fruits and vegetables	Specialties	Total
1 - 100,000	-	3	5	-	2/ 2	10
100,001 - 200,000	-	3	1	1	2	7
200,001 - 300,000	1	1	-	2	1	5
300,001 - 400,000	1	-	1	-	-	2
400,001 - 500,000	-	-	-	1	1	2
500,001 - 600,000	1	-	-	-	-	1
600,001 - 700,000	1	-	-	-	-	1
700,001 - 800,000	-	-	-	1	-	1
800,001 - 900,000	-	-	-	1	-	1
900,001 - 1,000,000	-	-	-	-	1	1
Over 1,000,000	-	-	-	1	2	3
Total	4	7	7	7	9	34

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

1/ Pack for 1 association not available. Pack for 2 associations given in barrels and gallons, respectively.

2/ Includes a small amount of experimental pack, cold pack, and brined pack.



FIGURE I. COOPERATIVES CAN A VARIETY OF PRODUCTS RANGING FROM SOUP TO NUTS



A classification according to number of grower members served for the 30 associations reporting, showed that 12 associations were serving an average of 250 or less, 10 were serving 251-1,000, 2 were serving 1,251-1,500, and 6 were serving over 2,000. The associations generally serving the smaller number of members were those packing vegetables and specialties.

The canneries surveyed were located principally in States near the border of the United States. Almost without exception the larger associations were located in areas where transportation by water was readily available.

#### STORAGE

With the increase in the hand-to-mouth buying by wholesale food distributors which has taken place within the last decade or two, there has developed a need for more adequate storage facilities by canners. The need for storage also arises from the seasonal production and more or less uniform consumption of many canned foods. As experienced by most cooperative canneries, the need has been for more adequate local storage. This has grown out of the necessity of providing economical storage under conditions favorable to low-cost financing and carrying of pack.

As a general rule, cooperative canneries own sufficient storage space to meet the local storage requirements under usual operating conditions. Among the associations reporting, 26 were operating without leasing any storage space (table 4). One association was leasing space for storage with a capacity of over 300,000 cases, while five associations were leasing space with a capacity for storage of 150,000 cases or less. There were 22 associations each with owned storage capacity for 250,000 cases or less.

Table 4.- Capacity of Owned and Leased Storage

Capacity of storage (cases)	Number of associations having -	
	Owned storage	Leased storage
1 - 50,000.....	5	2
50,001 - 100,000.....	8	2
100,001 - 150,000.....	2	1
150,001 - 200,000.....	4	-
200,001 - 250,000.....	3	-
250,001 - 300,000.....	-	-
Over 300,000 .....	9	1
Total 1/.....	32	32

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

1/ One association reported no owned storage, and 26 associations reported no leased storage.

Eight of the 18 associations reporting, or 44 percent, were using warehouses licensed under the United States warehouse act. All classifications, except the dairy and poultry group, contained associations storing goods in warehouses licensed under the United States warehouse act. Those associations operating under this act generally reported a satisfactory experience. Economy and convenience were the reasons most frequently given for storing canned goods in the type of warehouses used.

A majority of the associations made use of some type of storage at regional or terminal markets (table 5). About one-third of the organizations reported no use made of regional or terminal storage.

Table 5.- Type of Regional or Terminal Market Storage Used

Type of storage used	Number of associations handling -					Percentage of total
	Dairy and poultry products	Vegetables	Fruits	Fruits and vegetables	Specialties	
Public	2	-	5	1	9	17 51.5
Broker	-	2	-	1	-	3 9.1
Other	1	-	-	-	-	1 3.0
None	1	5	2	3	1	12 36.4
Total	4	7	7	5	10	33 100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

The organizations packing specialties, fruits, and dairy and poultry products were more extensive users of public storage at regional and terminal markets than the other classifications, probably due to the wider distribution of their products. Organizations packing vegetables reported no use of public storage although two such associations did use storage facilities furnished by brokers.

Organizations making use of public storage at terminal markets generally did so to have spot stocks 1/ at important markets to insure prompt delivery of goods to their customers. The ability to make prompt delivery from spot stocks frequently means the difference between making or losing a sale. With the tendency for wholesalers to carry smaller stocks in proportion to sales, increasing use of public warehouses for storage at central markets may be made by canneries. Some associations, however, have made serious mistakes

1/ Spot stocks are those which are shipped by the canner and stored as his property in a public merchandise warehouse at a center where the canner thinks the goods will be needed to supply consumer demand.

by storing goods at central markets without having had adequate experience with the choice of markets at which to store. Where mistakes have been made, it has sometimes been necessary to correct them by reshipments to other markets, thus adding to the cost. There is also the difficulty of maintaining adequate stocks of the various sizes, grades, and commodities, which may become a problem where stocks are carried at many different markets.

### INSURING STOCKS IN STORAGE

Practically all associations carried fire insurance on canned goods in storage. About one-half of the associations carried wind-storm insurance, one-third insurance against loss or damage from water, and 10 percent earthquake insurance (table 6).

Table 6.- Types of Insurance Carried by Associations

Hazard against which association is insured	Number of associations insured	Percentage of associations insured
Fire	36	97.3
Windstorm	19	51.4
Water	12	32.4
Earthquake	4	10.8
Product liability	24	64.9
Other	7	19.7

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Nearly two-thirds of the organizations carried product liability insurance in one form or another. In most cases, where this kind of insurance was carried, there was restricted protection provided through membership in a trade association. Product liability insurance is designed to protect the insured from claims of consumers who suffer (or claim to suffer) injuries or damages arising from the use of the product. This type of claim, in some large cities, bears certain aspects of a "racket," against which product liability insurance becomes essential for the protection of the canner.

## FINANCING STOCKS IN STORAGE

Desirable canned foods, stored in good warehouses and fully protected by insurance, offer capably managed cooperatives an excellent basis for loans at low interest rates. The sound financing of stocks in storage is a prerequisite to successful merchandising. Relatively few cooperative canneries require no financing of their warehoused products.

In some cases the raw materials are frozen and carried in storage. Withdrawals are made from cold storage and processed for prompt shipment. There is, under such circumstances, little need for carrying large stocks of the processed commodity in storage, and the financing of such stocks as are carried is not important. There does exist, however, the problem of financing the frozen products in storage. Frequently these frozen goods are financed through the same sources as the processed commodities and on essentially the same basis.

### Sources of Loans

Fifty-eight percent of the associations reporting financed their packs in storage entirely through the banks for cooperatives (table 7). Nineteen percent of the cooperatives were financed through other banks, while 14 percent were financed jointly by the banks for cooperatives and other banks. For this sample of 36 associations, the banks for cooperatives were financing either wholly or jointly with other banking institutions the pack of almost three-fourths of the associations.

Table 7.- Sources of Credit

Sources	Number of associations	Percentage of associations
Banks for cooperatives .....	21	58.3
Other banks .....	7	19.4
Banks for cooperatives and other .....	5	13.9
Can company .....	1	2.8
Other .....	1	2.8
None .....	1	2.8
Total .....	36	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Interest rates per year on loans primarily secured by canned goods in storage ranged from somewhat more than 1 percent to over 5 percent (table 8). Forty-three percent of the associations paid rates of 1.1 percent to 2 percent, while 30 percent paid rates of 2.1 to 3 percent.

Table 8.- Interest Rates on Loans Primarily Secured by Commodities

Interest rate	Number of loans	Percentage of loans
0 - 1.0 percent .....	-	-
1.1 - 2.0 percent .....	16	43.3
2.1 - 3.0 percent .....	11	29.7
3.1 - 4.0 percent .....	2	5.4
4.1 - 5.0 percent .....	5	13.5
Over 5.0 percent .....	3	8.1
Total .....	37	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

The interest rate charged by the banks for cooperatives on commodity loans on December 1, 1940, was 1 1/2 percent per year. In Puerto Rico the interest rate charged by the bank for cooperatives was one-half of 1 percent higher than the rate stated above. Interest is charged by the banks for cooperatives only on the unpaid principal portion of the loans, and only for the period during which the unpaid balance is outstanding.

While the rate of interest paid is important from the standpoint of cost to the association, there are other factors of prime importance, which should require careful consideration on the part of the association management in negotiating a commodity loan. These factors are usually set forth in a loan agreement entered into between the association and the financing institution. Loan agreements frequently are stated in great detail. A detailed statement of the terms and conditions of the loan is desirable from the standpoint of the association and the financing institution because a clear written understanding made in advance of a loan lessens the possibility of any misunderstanding which may occur after the loan is made.

Among the important provisions generally included in the loan agreement in addition to the interest rate are the rate of advance, type of lien, margin of collateral, repayment and release of collateral, and acceleration of sales.

### Rate of Advance

Ordinarily the rate of advance, or the amount per unit which the financing institution agrees to advance to the cooperative, is of prime importance to both parties because it may largely determine the safety of the loan from the standpoint of the bank and the acceptability of the loan to the association. A bank, to be able to loan money at low rates of interest, must necessarily require that such loans be adequately secured. While the association is interested in protecting the bank by requesting only conservative advances on its products, it is oftentimes faced with the perplexing problem of making such loans not only cover its operating and processing costs but to make what its members regard as reasonable advances on the products delivered.

Since the canned goods ordinarily are readily salable at market prices which are widely known for most commodities, loans may safely be made to efficiently operated cooperatives at a rather high percentage of the net market value, with due regard for price fluctuations which may occur. One-fifth of the associations reported a loan basis of over 70 percent of the net market value (table 9). Sixty-eight percent of the associations were carrying loans with a rate of advance of 61 to 70 percent, while the remainder had loans of 51 to 60 percent of market value.

Table 9.- Loan Basis (Rate of Advance)

Percentage of market value	Number of loans	Percentage of loans
0 - 50 percent .....	-	-
51 - 60 percent .....	3	12.0
61 - 70 percent .....	17	68.0
Over 70 percent .....	5	20.0
Total .....	25	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

An examination of the five associations reporting loans of over 70 percent of the market value showed that the financial condition of the associations was either very weak or exceptionally strong. The financing institutions, no doubt, felt that the high rate of advances to the weaker associations was justified by factors not always discernible in casual review. Such factors are numerous. The most common is the desire to assist the association to carry out an orderly marketing program as against immediate forced sale in a distressed market.

In one case where the rate of advance was over 70 percent to one association, the financing institution probably felt that its loan was adequately secured by the very strong financial position of the association.

#### Type of Lien

In about three-fourths of the cases, warehouse receipts were the type of lien given to secure the loan. Collateral of this type was used by all of the commodity groups. The warehouse receipt is generally the most acceptable form of security used for canned foods both from the standpoint of borrower and lender. From the standpoint of the lender, it is important that the warehouse receipt carry a statement clearly describing the commodities which the receipt represents. It should contain a statement as to the quantity, quality, grade, or condition of the product.

Warehouse receipts issued under authority of the United States warehouse act call for a statement of the lot number, warehouse compartment number where stored, case or code marks, cased or uncased, labeled or unlabeled, brand, and grade. The grade statement required is according to grades approved by the United States Department of Agriculture. These receipts may be negotiable or nonnegotiable and carry a statement concerning whether the canned foods are insured by the warehouseman, the charges claimed by the warehouseman for receiving, handling, storing, and delivering, and a statement that the grade and condition were determined by an inspector licensed under the United States warehouse act.

The use of a chattel mortgage as a type of lien was reported by 9 percent of the associations. Banking institutions in some States have been willing to accept collateral in this form, although its use is not widespread.

#### Margin of Collateral

Once advances have been made under a loan agreement, the value of the stored commodities may change with changes in market prices or condition of the product in storage. The loan agreement usually contains a provision to protect the lender in a declining market. Such a provision, for example, might state that in case the net market value of the pledged commodity depreciates to such an extent that the outstanding loans secured by the commodity exceed a stated percentage (for example 75 percent) of the net market value thereof, upon demand of the lender, additional warehouse receipts, cash, or other security acceptable to the lender, will be deposited with the lender so that the aggregate advances then outstanding on all notes shall not be in excess of a stated percentage (for example 70 percent) of the net market value of all collateral pledged to the

lender. A further provision is generally included which allows the lender to sell, after due notice to the association, the merchandise, or as much as may be needed to restore the margin, if the required margin has not been restored within a reasonable time, as determined by the lender.

About 85 percent of the associations reporting were required to maintain a stated margin of collateral (table 10). About 15 percent stated that they had no agreement with respect to a margin requirement. Four associations did not specify what margin agreement, if any, existed. Loans made on a basis requiring no margin of collateral cannot qualify as "commodity" loans under regulations governing the banks for cooperatives.

Table 10.- Margin of Collateral Required

Margin of collateral	Number of associations handling -						Percent-age of total
	Dairy and poultry products	Vege-tables	Fruits	Fruits and vegetables	Specialties	Total	
Margin required	1	6	6	7	8	28	84.8
No margin required	1	-	1	-	3	5	15.2
Total	2	6	7	7	11	33	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

#### Repayment and Release of Collateral

Loan agreements with the banks for cooperatives specify conditions for repayment of loans made thereunder and for the release of collateral. The agreements vary with circumstances, but generally require the associations to repay more than 100 percent of the amount loaned on such collateral to obtain release of the collateral pledged so long as the association is not in default under the terms of the agreement. It is further provided that the bank may in its sole discretion require the application of the entire sales proceeds of all products so released to discharge the association's obligation to the bank.

Various special arrangements were sometimes made in which the association was required to repay the lending institution all or a specified percent of the proceeds of sale to obtain release of collateral. Generally the financial condition of the association was a factor of importance affecting the terms of repayment and release of collateral.

### Acceleration of Sale

The lender, from the standpoint of self-protection, needs to keep informed as to market changes and the rate at which the commodities on which he has made loans are moving to market. The loan agreement may contain an acceleration clause providing that, if, in the opinion of the lender, the association is not marketing with sufficient rapidity the commodity pledged to the lender, the lender, if he deems it advisable for the protection of his loans, may call upon the association to accelerate its sales. If the lender's request is not complied with, the lender shall have the right without further notice to sell from time to time, out of the property pledged as collateral, whatever amounts he deems necessary and apply the entire net proceeds to the payment of the loan.

About 81 percent of the associations reported their loan agreements contained a clause providing for the acceleration of sales (table 11). About 19 percent stated that their agreements contained no such clause.

Table 11.- Acceleration of Sales Basis

Acceleration of sales basis	Number of associations handling -						Percentage of total
	Dairy and poultry products	Vege-tables	Fruits	Fruits and vegetables	Specialties	Total	
Acceleration clause	1	4	4	6	6	21	80.8
No acceleration clause	-	1	2	-	2	5	19.2
Total	1	5	6	6	8	26	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Ordinarily, financing institutions making loans on the security of warehouse receipts require notes executed by the borrower in form acceptable to the lending institution and payable on demand in 3, 6, 9, or 12 months from the date of the note. Although a number of associations had loans with maturity dates ranging from 3 to 9 months, there were 15 associations having loans with maturity dates in excess of 9 months. It is very definitely in the interest of the association to have a loan agreement setting forth a schedule of loans which it will request on about the dates when advances will be required, and with maturity dates which will permit repayment as the products are marketed throughout the usual marketing season.

Over a long period of time loans made on warehouse receipts issued by responsible public warehousemen, have proven safe and profitable to financing institutions. With this type of security, the lender is protected against third party claims should the borrower fail. This would not be true if the same loan had been made on a trust receipt or a chattel mortgage rather than a warehouse receipt. Loans made on trust receipts or chattel mortgages involved an element of moral risk because the products on which the loan is made remain in the hands of the borrower, and the lender does not have the same security he would have if the products were in the custody of a disinterested third party such as a warehouseman.

#### CHANNELS OF DISTRIBUTION

The usual distribution channels used by cooperative canneries include the food broker, the wholesale grocer or chain store, and the retail food store. The food broker, as a rule, does not have possession or absolute control of the canned products. His function is to obtain and transmit orders for the canners which he represents at prices and on terms specified by his principals. For this service, the broker usually receives an agreed percentage of sales or brokerage, which varies from 2 to 5 percent of sales. A higher brokerage rate generally is paid for sales of fruits and specialties than for vegetables. The rate frequently is a matter of negotiation between the canner and the broker. The larger canners packing a more desirable line of products, from the broker's viewpoint, frequently pay a lower rate of brokerage.

Sales are usually made to wholesale grocers and chain-store buyers through brokers. Occasional sales are made direct. Wholesale grocers render a number of important services including assembly, storage, and credit. Chain-store warehouses function very much the same as wholesale grocers in the assembly and storage of canned foods.

The canner, although he usually does not sell the retail food store, is concerned with many of the operations in these stores. He is particularly concerned with all of those things which influence the consumption and demand for his products. These include retail prices, display, and the sales effort which the retailer puts back of his product, because these factors affect the consumption and demand for the output of his factory.

#### Use of Brokers

Almost without exception, cooperative canneries use brokers in making sales. The single exception among the 37 examined was a cooperative producing a specialty. This cooperative was located

near large markets which took practically all of the output of the factory. However, this association previously had used brokers to introduce the product and establish outlets through which sales could readily be made.

Brokers were used mostly for reasons of economy, market coverage, and convenience. No other method has yet been developed to merchandise the canned foods produced by cooperatives so effectively and economically as the use of brokers. Use has been made of branch sales offices by some 8 cooperatives. One association reported using over 10 branch sales offices. In this instance, the cooperative was interested chiefly in the sale of manufactured dairy products rather than canned goods and the branch sales offices maintained for the other products were utilized for the sale of evaporated milk. The dairy and poultry cooperatives, and organizations producing specialties, were making the greatest use of branch sales offices.

For associations using brokers, various methods were followed in selecting brokers, including personal interviews and trade recommendations (table 12). Cooperative officials were much more active in locating and soliciting brokers than were brokers in soliciting them. About one-third of the cooperatives made their selection of brokers following personal interviews with those whose appointments they were considering. Trade recommendations, chiefly those made by the larger customers of the cooperatives, played an important part in broker selection. While it is desirable to know what customers think of brokers whom cooperatives are considering using, care should be exercised to guard against biased recommendations based on factors which, if the broker were employed, might result in his favoring the customer recommending him.

Table 12.- Methods Used by Cooperative Canneries in Selecting Brokers

Method used	Number of associations handling -						Percent- age of total
	Dairy and poultry products	Vege- tables	Fruits	Fruits and vege- tables	Spe- cial- ties	Total	
Personal inter- views	1	3	1	2	4	11	33.3
Trade recom- mendations	2	1	-	1	2	6	18.2
Personal inter- views and trade recommendations	-	-	1	1	5	7	21.2
Solicitations and trade recom- mendations	-	-	-	1	-	1	3.0
Other	-	2	4	2	-	8	24.3
Total	3	6	6	7	11	33	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Brokers are personally contacted by their principals at infrequent intervals throughout the year. About one-fifth of the associations contact their brokers no more often than annually (table 13). About 23 percent contact their brokers semiannually, while one-fifth make quarterly contacts. About 3 percent make monthly contact. The dairy and poultry cooperatives and those handling specialties made more frequent personal contacts with their brokers than the other groups.

Table 13.- Frequency of Personal Contacts With Broker

Frequency of contacts	Number of associations handling -						Per- centage of total
	Dairy and poultry products	Vege- tables	Fruits	Fruits and vegetables	Special- ties	Total	
Annually.....	-	2	2	1	1	6	20.0
Semiannually	-	2	1	3	1	7	23.4
Quarterly.....	1	-	-	-	5	6	20.0
Monthly.....	1	-	-	-	-	1	3.3
Other.....	-	1	3	3	3	10	33.3
Total.....	2	5	6	7	10	30	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

The usual place of contact is at the broker's office or at the food convention. Many associations make it a point to attend the annual meeting of the National Canners Association and make appointments to see their brokers at this convention. A few associations arrange to have some of their brokers visit their plants during the operating season to give them a better opportunity to become acquainted with factory operations and the general character and quality of the pack. Other associations have, through the use of moving pictures, brought scenes of their packing operations to their brokers' offices or have shown the film to brokers and buyers attending the annual food conventions. Some of the dried fruit and nut cooperatives have for many years given annual dinners to their brokers at the food conventions and have used this means to develop a feeling of mutual respect and confidence and thus lay the basis for increasing sales.

Field brokers are used by all groups except the dairy and poultry group. A field broker is usually defined as one who operates in the field as the economic link between a number of small canners and wholesale buyers. The field broker usually employs the services of general food brokers in the central markets through

which sales are made to wholesale buyers. Usually the brokerage charged is divided equally between the field broker and the broker at the central market. Occasionally the field broker finances the small canner..

About one-fourth of the cooperatives use field brokers regularly, while about 14 percent make infrequent use of them (table 14). A majority of the associations, however, make no use of field brokers. Only two of the specialty groups use their services. The use of field brokers by cooperatives, according to those reporting, is decreasing.

Table 14.- Number of Cooperative Canneries Using Field Brokers

Indicated use of field brokers	Number of associations handling -						Percent- age of total
	Dairy and poultry products	Vege- tables	Fruits	Fruits and vegetables	Special- ties	Total	
Regular	-	3	3	3	-	9	24.3
Infrequent	-	1	1	1	2	5	13.5
No use	4	3	3	3	10	23	62.2
Total	4	7	7	7	12	37	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

#### Wholesale Channels

The independent wholesale grocer is the principal customer of cooperative canneries. More than 80 percent of the sales by cooperatives for the 1938-39 season were made to wholesale grocers, of which less than 7 percent were made through the buying offices of the voluntary and cooperative chains (table 15, fig. 2). About 15 percent of sales during that season went to corporate chains.

Since it is estimated that corporate chains made from 34 to 38 percent of the total sales of grocery and combination stores in 1938-39, and that as a group the cannery cooperatives surveyed made only 15 percent of their total sales to corporate chains, it is evident that the cannery cooperatives were not selling to the chains their proportionate share of the chains' requirements.

The percentage of sales made by individual canneries to types of wholesale outlets varies widely. For example, percentage of sales to corporate chains ranged from zero to 63. Four of the associations whose records were examined made no sales to corporate chains, while 19 reported sales of 30 percent or less. Only 4 cooperatives reported sales of more than 30 percent.

Table 15.— Sales at 23 Canning Cooperatives to Wholesale Food and Grocery Outlets  
in the United States for the 1938-39 Season

Outlet	Number of food stores in the United States <u>1/</u>	Percentage of total <u>1/</u>	Grocery and combination food store sales in 1938 <u>1/</u>		Sales by canning cooperatives to grocery and combination food stores in 1938-39 season <u>2/</u>		Percentage of total sales <u>Percent</u>
			Total sales <u>1,000 Dollars</u>	Percentage of total sales <u>Percent</u>	Total sales <u>Dollars</u>	Percentage of total sales <u>Percent</u>	
Corporate chain	45,000	10.3	2,657,000	34.4	1,971,106	15.0	
Total nonchain	392,250	89.7	5,076,000	65.6	10,803,379	82.2	
Government	-	-	-	-	365,257	2.8	
Grand total	437,250	100.0	7,733,000	100.0	13,139,742	100.0	

1/ Retail grocery and combination stores. Facts in Food and Grocery Distribution, January 1939.

2/ Survey made by the Cooperative Research and Service Division, 1939-40.

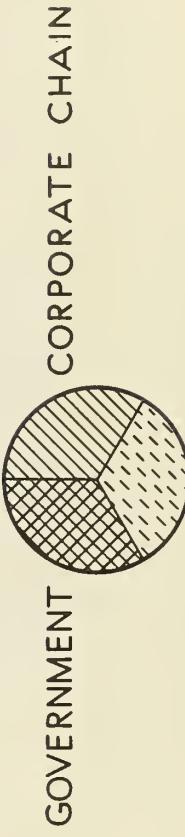
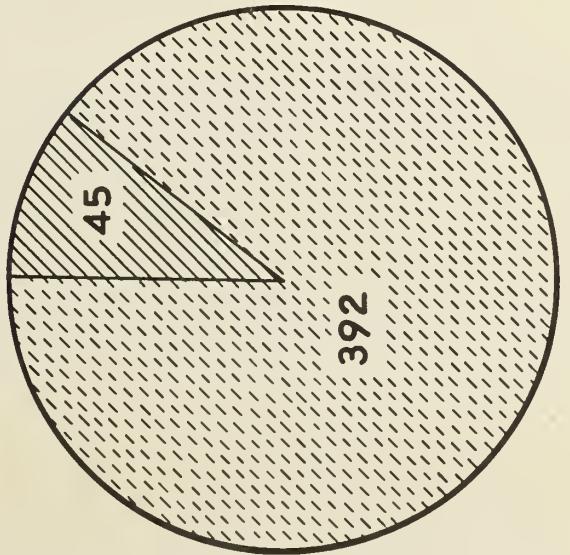
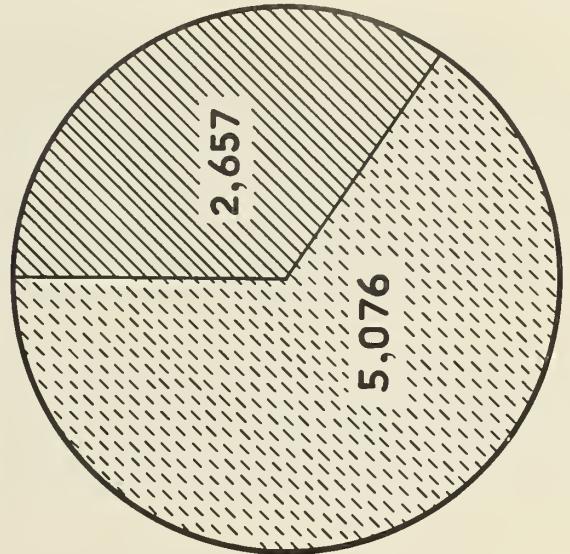
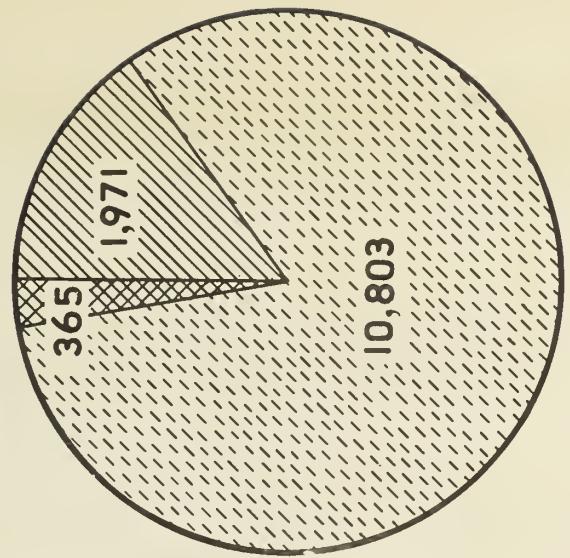
3/ Includes small amount of experimental pack; cold pack and brined pack.

FIGURE 2

## Sales by 23 Associations to Wholesale Outlets in the United States, 1938-39

NUMBER OF  
FOOD STORES  
IN THE  
UNITED STATES  
Thousands of Food Stores

SALES BY CANNING  
COOPERATIVES TO GROCERY  
AND COMBINATION FOOD  
STORES IN 1938-39 SEASON  
Thousands of Dollars





An examination of sales made by 23 cooperatives for the 1938-39 season to the largest of the corporate chains showed that 8 cooperatives made no sales to this chain, 10 made up to 10 percent of their total sales to the chain, 2 from 11 to 20 percent, 2 from 21 to 30 percent, and 1 from 31 to 40 percent.

An examination of the sales made by this same group of cooperatives indicated that 10 of them made no sales to the second leading corporate chain system, 8 made up to 10 percent of their total sales to the chain, 2 made from 11 to 20 percent, 1 made from 21 to 30 percent, and 2 made from 31 to 40 percent.

Sales to other leading corporate chains showed a tendency for farmer cooperatives to sell less to chains as the chains became regional in scope rather than national.

The policy of cannery sales managers to distribute their sales through independent wholesale grocers, corporate chains, and other wholesale outlets, rather than using one type of outlet to the virtual exclusion of others, is commendable. Obviously a measure of protection is afforded the seller who maintains a large number of customers, which the seller who depends chiefly on one or two large customers to take the output of his factory does not have, particularly under conditions in which buying practices of the larger distributors are subject to frequent change.

The trend of sales to wholesale grocers, super markets, and corporate chains, as reported by 30 associations for the marketing seasons 1936-37, 1937-38, and 1938-39, was rising. The trend of sales showed little change during that period to voluntary and cooperative chains and consumer cooperatives.

#### CREDIT TO BUYERS

Credit is extended to buyers by about 71 percent of the associations reporting, while about one-fourth of the associations do not extend credit (table 16). The remainder seldom extend credit but may do so under certain conditions. The extension of credit is common to all commodity classifications, although a smaller percentage of those packing fruits make a practice of credit extension than of the other groups. One or more associations in each group, with the exception of the dairy and poultry group, do not extend any credit. All four associations of the dairy and poultry group extend credit to their customers.

Table 16.- Number of Associations Extending Credit

Credit policy	Number of associations handling -						Per- cent- age of total
	Dairy and poultry products	Vege- tables	Fruits	Fruits and vegetables	Special- ties	Total	
Extend credit	4	6	2	5	8	25	71.4
Do not extend credit	-	1	4	1	3	9	25.7
Seldom extend credit	-	-	-	1	-	1	2.9
Total	4	7	6	7	11	35	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

The percentage of total business done on credit varies greatly. Sixteen associations reported that from 76 to 100 percent of their business was done on credit (table 17). Five associations reported doing from 1 to 25 percent of their business on credit. Associations have found it feasible to extend credit to some customers while making cash sales to others. It is probable that most associations have followed the usual trade custom with respect to credit.

Table 17.- Portion of Business Done on Credit

Percentage of business done on credit	Number of associations
1 - 25 percent	5
26 - 50 percent	2
51 - 75 percent	1
76 - 100 percent	16
Total	24

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Various methods were used to determine the basis for credit. About 39 percent of the 23 associations reporting used standard credit rating guides (table 18). To some extent they depended upon

past experience to supplement the credit rating, or upon broker recommendations. While brokers did not guarantee collections on goods sold on credit on their recommendations, they did take a personal pride in seeing that collections were promptly made in such cases. Failure to do so might result in loss of confidence of the cooperative in the broker and result in the broker's losing the account.

Table 18.- Condition Under Which Credit Is Extended

Condition	Number of associations	Percentage of associations
On credit rating	9	39.1
On buyer classification	1	4.3
Credit rating and experience	3	13.1
Rating and broker recommendation	2	8.7
Other	8	34.8
Total	23	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Credit losses reported by 31 associations varied from nothing to approximately one-half of 1 percent of sales (table 19). About one-half of the associations had credit losses of one-fourth percent or less while about an equal number reported no credit losses.

Table 19.- Credit Losses As a Percentage of Sales,  
1938-39 Season

Credit losses as a percentage of sales	Associations indicating percentage	
	Number	Percent
None	13	41.9
0.01 - 0.25 percent	15	48.4
0.26 - 0.50 percent	2	6.5
Over 0.50 percent	1	3.2
Total	31	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

## TRANSPORTATION

Of 35 associations reporting on methods of transportation used in distributing their products, most of them made shipments by rail, water, and motortruck. Only 2 associations made no shipments by rail, 7 did not ship by water, and 3 did not ship by motortruck (table 20). Where water transportation was available, generally it was used, due primarily to lower rates. On the other hand, over three-fourths of the shipments were made for 2 associations by rail, for 1 association by water, and for 6 associations by motortruck. With many shipments all 3 methods of transportation were employed. For example, shipments from the West Coast to interior markets on the East Coast might move from the factory by rail or truck to the port, then by water to the eastern seaboard, and complete the journey by rail or truck to the interior market.

Table 20.-- Percentage of Shipments Predominantly  
by Rail, Water, and Truck

Percentage shipped	Number of associations shipping indicated percentage by -		
	Rail	Water	Motortruck
None	2	7	3
1 - 25 percent	11	16	15
26 - 50 percent	11	6	5
51 - 75 percent	9	5	6
76 - 100 percent	2	1	6
Total	35	35	35

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

The classification of shipments was done on the basis of the carrier over which shipments were made predominantly. The motor-truck is a very important carrier in the distribution of canned foods. Twelve associations were shipping more than one-half their volume predominantly by motortruck, 11 were shipping more than one-half by rail, and 6 were shipping more than half by water.

Choice of transportation, to some extent, depended upon the services available to the associations. Since most of the cooperative canneries are located near the borders of the United States, principally along the Pacific, Atlantic, and Gulf Seaboards, and the Great Lakes, they are near water transportation. Canned goods

are heavy in relation to their volume and thus are well adapted to shipment by water wherever such service is available. Almost without exception, the larger and more successful associations have water transportation. The question may well be raised whether or not accessibility to water transportation is essential to the development of large-scale successful cooperative canneries.

Rail shipments by most associations move in carloads at the carload rate. Twenty associations reported that more than three-fourths of their shipments by rail were in carloads (table 21). Only one association reported making no carload shipments. Many associations make shipments in pool cars, thereby benefiting by the lower freight rate on carload shipments which the pool car takes.

Table 21.- Classification of Rail Shipments

Percentage shipped	Number of associations indicating percentage of rail shipments in -		
	Carlots	Pool cars	L.c.l.
None	1	9	13
1 - 25 percent	4	14	16
26 - 50 percent	4	5	1
51 - 75 percent	3	4	1
76 - 100 percent	20	0	1
Total	32	32	32

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

A pool car is a carload comprised of a number of small lots shipped to several consignees. Pool cars usually are received at general warehouses at central points for distribution to the buyers. The broker generally sees that deliveries from pool cars are made to the respective buyers and that each buyer is billed for his proportional share of the freight charge on the car if the freight is not prepaid. The size of the market and the individual orders received from the market rather than the volume of the shipper largely determine the extent of the use of pool cars. However, many of the smaller markets cannot readily handle pool car shipments and resort to less-than-carload shipments if necessary if small lots are to reach these markets by rail. Cooperatives make little use of less-than-carload shipments as a rule, although for a very few associations this method of shipment is very important. While 13

associations reported no less-than-carload shipments, there were 16 which shipped from 1 to 25 percent of their rail volume in less than carloads.

The use of pool cars is important to a number of cooperatives, with 4 reporting that more than half their rail shipments moved in pool cars, 5 moved from 26 to 50 percent, and 14 shipped from 1 to 25 percent in pool cars.

Shipments by water are almost always made in quantities sufficient to take the minimum weight carload rate. Twenty-six of 29 associations shipping by water moved from 91 to 100 percent of their total water shipments at the carload rate, while 1 moved over 75 percent of its shipments at this rate. Only 2 associations shipping by water were unable to ship at the carload rate.

Where sales are made to wholesale and chain-store buyers located within trucking distance of canneries, the buyers sometimes desire to pick up the goods in their own trucks at the cannery. This frequently is the case where the buyer has available empty trucks returning by the cannery enroute to the buyer's warehouse. Under such conditions either a saving in transportation costs or time can be effected, or there may be a saving in both.

While of some importance to a number of associations, only 4 of 31 reporting indicated that goods picked up by buyers' trucks exceeded 10 percent of their total deliveries (table 22). Fourteen, or almost one-half the associations, showed pickups as mounting to 3.1 percent or less of their total volume.

Table 22.- Percentage of Deliveries to Buyers Which are Picked up by Buyers' Trucks at Association Warehouse

Percentage of deliveries picked up	Number of associations having indicated percentage picked up	Percentage of total
None .....	5	16.1
Under 3.1 percent .....	14	45.2
3.1 - 5.0 percent .....	6	19.4
5.1 - 10.0 percent .....	2	6.4
Over 10.0 percent .....	4	12.9
Total .....	31	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

As most associations quote prices f.o.b. their warehouses, there were no price concessions made on goods picked up at the warehouse. Only in cases where delivered prices were quoted were price concessions reported and these were on the basis of the commercial truck rate or a freight allowance. In either case, the buyer benefited to the extent a saving in transportation cost could be made or more rapid delivery secured.

#### GEOGRAPHIC DISTRIBUTION OF SALES

The extent to which 24 cooperative canneries have achieved national distribution of their products is shown in tables 23 to 31. Total United States sales for these 24 cooperatives for the 1938-39 season were \$14,690,013.<sup>24</sup> In addition, there were foreign sales of about a million dollars and undistributed domestic sales of approximately three-quarters of a million dollars, not shown in figure 3 and the accompanying tables.

For rough comparison of the distribution of sales by geographic areas, there is given a corresponding percentage breakdown of national income paid out for the calendar year 1939. National income is used as a convenient index or very rough potential of the market for canned foods by geographic areas. Other single indexes which might have been used would include population, retail food sales, total retail sales, or some composite regional income index.

This group of cooperatives is distributing about one-third of its pack in the New England and Middle Atlantic States. These two geographic areas accounted for about 36 percent of the national income paid out in 1939 and about 27 percent of the United States population. The cooperatives marketed about one-third of their pack in the Pacific States, which received about 10 percent of the national income in 1939 and had about 7.4 percent of the population. Thus the total sales of cooperatives by geographic areas means little except to indicate in some degree the competition between cooperatives in the various areas and the dollar volume of products packed by cooperatives which are distributed in those areas. Undoubtedly factors such as transportation rates, competition commodities packed, and effectiveness of sales effort largely govern the markets which can profitably be reached. The location of the cooperative with respect to markets, therefore, becomes of primary importance.

#### Effect of Location on Distribution of Sales

Examining more closely table 24 it will be noted, for example, that the associations in the New England and Middle Atlantic States marketed slightly more than half of their products in that area. Associations located in the Pacific States marketed slightly less

Table 23.- Canned Foods: Distribution by Geographic Areas of Sales of 24 Associations Grouped by Location, 1938-39 Season 1/

Location of buyer	Percentage of total sales by associations in -						Percent
	New England and Middle Atlantic States 2/	South Atlantic and West Central States 3/	E. North Central States 4/	Mountain States 5/	Pacific States 6/	All areas	
New England	20.7	12.7	7/	-	-	5.3	8.9
Middle Atlantic	32.8	32.8	5.0	-	23.0	25.3	
East North Central	15.6	18.3	20.5	-	9.7	12.0	
West North Central	5.6	10.4	32.5	-	5.4	6.6	
South Atlantic	8.8	4.1	5.1	-	2.8	4.0	
East South Central	2.2	2.1	4.2	-	•3	•9	
West South Central	5.7	9.0	32.7	-	2.2	4.4	
Mountain	1.7	1.7	-	12.9	3.6	3.1	
Pacific	6.9	8.9	-	87.1	47.7	34.8	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic sales \$14,690,013.24.

2/ Includes 3 associations. Data for one association are for 1937-38 season.  
 3/ Includes 3 associations. Data for one association are for calendar year 1939.

4/ Includes 3 associations.  
 5/ Includes 2 associations. Data for one association are for December 1938 to November 1939 inclusive, and for other association, October 1938 to September 1939 inclusive.

6/ Includes 13 associations. Data for one association are for 1939-40 season.  
 7/ Less than .05 percent.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

than half of their products in the Pacific area (table 25). The remainder in each area was marketed as indicated in the tables.

It is evident from these tables that there is a considerable volume of cross-hauls in the distribution of canned goods produced by this group of cooperatives. This, of course, results in part from competition, and in part from specialization in production and in commodities produced. To some extent the cross-hauls are essential to obtain proper distribution of the various grades of the commodities packed.

Table 24.- Canned Foods: Distribution by Geographic Areas of Sales of 3 Associations Located in the New England and Middle Atlantic States, 1938-39 Season <sup>1/</sup>

Geographic area	Percentage of total sales in area by -			
	Association 3 <sup>4</sup> 2/	Association 13 3/	Association 27	Total
	Percent	Percent	Percent	Percent
New England	22.6	33.7	.4	20.7
Middle Atlantic	34.2	29.4	19.5	32.8
East North Central	12.0	27.1	49.7	15.6
West North Central	5.6	9.8	4.6	5.6
South Atlantic	9.4	-	4.1	8.8
East South Central	2.4	-	.5	2.2
West South Central	6.2	-	1.6	5.7
Mountain	1.8	-	1.1	1.7
Pacific	5.8	-	13.5	6.9
Total	100.0	100.0	100.0	100.0

<sup>1/</sup> Total domestic sales \$2,596,375.97.

<sup>2/</sup> Percentage established for geographic areas on basis of cases sold as furnished on Form BA-H-3. These percentages were then applied to gross billings in dollar value for 1938-39 as furnished on Form BA-H-2.

<sup>3/</sup> Data are for 1937-38 season.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Table 25.- Canned Foods: Distribution by Geographic Areas of Sales of 13 Associations Located in the Pacific States, 1938-39 Season 1/

Geographic area	Percentage of sales in area by association number -						
	21	23	25	29	16	14	15
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
New England	1.3	4.9	9.5	23.3	2.4	4.7	3.6
Middle Atlantic	24.4	19.6	18.4	22.1	20.5	54.2	32.9
East North Central	1.4	10.7	14.9	5.9	12.2	11.7	17.9
West North Central	5.7	17.3	9.2	6.1	18.9	12.2	17.1
South Atlantic	.2	.9	6.9	6.6	-	2.9	.8
East South Central	-	.6	2/	-	-	.5	-
West South Central	1.8	5.2	1.2	.8	-	2.8	7.3
Mountain	16.1	1.4	1.5	12.2	12.2	1.2	7.2
Pacific	49.1	39.4	38.4	23.0	33.8	9.8	13.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

	Association number -						Total
	19	12	2	1	4	22 3/	
	Percent	Percent	Percent	Percent	Percent	Percent	Percent
New England	5.5	9.1	-	4/ 1.1	9.2	5.2	5.3
Middle Atlantic	37.4	42.2	-	4/ 1.1	25.4	45.7	23.0
East North Central	16.4	6.7	-	-	8.2	22.2	9.7
West North Central	13.0	2.1	-	-	2/	4.7	5.4
South Atlantic	1.5	.2	-	-	4.6	4.4	2.8
East South Central	1.1	.4	-	-	-	1.0	.3
West South Central	4.7	3.2	-	2.1	.3	4.2	2.2
Mountain	3.7	5.6	2.8	5.3	2.6	1.4	3.6
Pacific	16.7	30.5	97.2	90.4	49.7	11.2	47.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic sales \$9,543,942.09.

2/ Less than 0.25 percent.

3/ Data for 1939-40 season.

4/ Eastern sales prorated to New England and the Middle Atlantic States.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

For example, it was found that the markets served by packers of canned tomatoes in the Ozark region must draw on cannery supplies from other areas for supplies of fancy grade, for this grade is not produced commercially in the Ozark section.

For many vegetables, particularly of the lower grades, distribution is determined largely by transportation costs. The normal or usual market, for example, for Ozark canned tomatoes, is composed

of eight States, all lying west of the Mississippi River with the Ozark region located near their center. It is estimated that 90 percent or more of the tomatoes canned in the Ozark region are distributed in these eight States within a radius of 500 miles from Fayetteville, Ark.

#### Effect of Size on Distribution of Sales

There is a tendency for the smaller associations to have fewer brokers and customers and to distribute larger percentages of their products near their factories. Both the volume of sales and the location of the cannery are factors in sales distribution. Other factors affecting distribution include the commodity, grade, character of sales effort, marketing experience, and number of items packed.

A specialty, such as mushrooms, production of which is concentrated chiefly in one or two areas, may have a wide distribution, although the output of the factory may not be large. Plants located in areas where they have a comparative advantage in the packing of the higher grades may, for this reason, find a wider market for their products. The size of the sales force and character of the sales effort placed back of a product may result in wider distribution. The age and marketing experience of an association may be an important factor in sales distribution because it takes time and effort to gain access to markets and build up a preference and demand for an association's output. The variety of products and the number of items packed also influence the distribution of sales. Generally, organizations with a more extensive line may be expected to gain wider distribution.

Table 26 shows sales distribution by associations grouped according to size.

The effect of size upon sales distribution, however, is obscured by the presence of other factors previously mentioned. It appears, therefore, that the effect of location upon sales distribution may be greater than the influence of size upon distribution of sales.

#### DISTRIBUTION OF SALES BY COMMODITY GROUPS

Associations packing the same or related commodities of similar grades are more directly competitive than those packing unrelated commodities. While in the broad sense all foods are more or less competitive, those which have the same or similar uses, that is, for which there are substitutes, are more directly competitive. For example, grapefruit juice, grape juice, pineapple juice, and tomato juice are competitive juices and the packers of each need to keep informed of the production and consumption of all. However,

grapefruit-juice packers are more interested in what other grapefruit-juice packers are doing than in what packers of other juices may be doing.

Table 26-- Canned Foods: Distribution by Geographic Areas of Sales of 24 Associations Grouped by Sales Volumes, 1938-39 Season 1

Location of buyer	Percentage of total sales in area for associations selling -					
	Less than \$100,000 2/	\$100,000 to \$500,000 3/	\$500,001 to \$750,000 4/	\$750,001 to \$1,500,000 5/	More than \$1,500,000 6/	Total sales by all volume groups
New England	3.9	2.1	6.7	7.8	12.3	8.9
Middle Atlantic	5.6	19.6	38.2	30.9	19.9	25.3
East North Central	16.1	16.0	11.8	13.2	9.8	12.0
West North Central	6.7	15.0	7.8	5.4	5.3	6.6
South Atlantic	.6	2.2	3.1	2.8	6.0	4.0
East South Central	3.4	1.2	.5	.8	.9	.9
West South Central	8.5	9.7	2.4	4.5	3.3	4.4
Mountain	8.3	5.8	2.5	2.5	2.7	3.1
Pacific	46.9	28.4	27.0	33.1	39.8	34.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic sales \$14,690,013.24.

2/ Includes 7 associations, of which 3 associations supplied data for periods as follows: 1 for 1937-38 season; 1 for December 1938-November 1939 inclusive, and 1 for October 1938-September 1939 inclusive.

3/ Includes 6 associations.

4/ Includes 3 associations.

5/ Includes 5 associations. Data for 1 association for calendar year 1939, for another association for 1939-40 season.

6/ Includes 3 associations.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

In this section, discussion is directed toward five groups of related commodities of the following classes: Citrus juice, fruits, vegetables, fruits and vegetables, and dairy and poultry products.

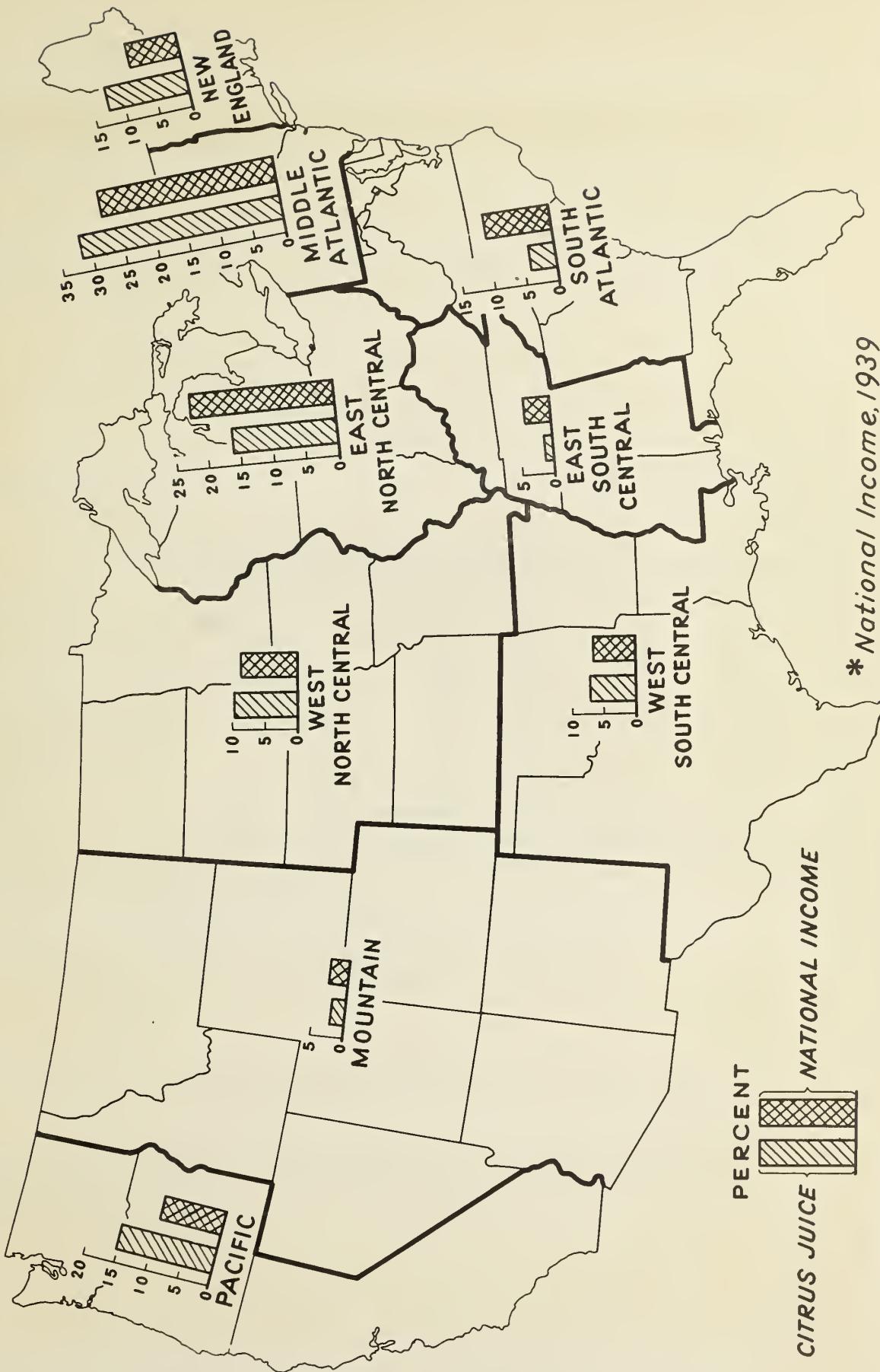
### Citrus Juice

The four organizations in this group are packing principally grapefruit juice, although some orange and lemon juice and grapefruit segments are included (table 27, fig. 3). The three principal producing areas of Florida, Texas, and Arizona-California are represented. Total United States sales of this group for the 1938-39 season amounted to \$2,112,736. Since cooperatives can an important portion of the total United States pack of citrus juices and the associations studied are the larger packers, the sales distribution data are believed to be significant.

When judged by the distribution of sales of this group during the 1938-39 season, the principal markets are in the Middle Atlantic, East North Central, and New England States, which represented about 60 percent of the sales. These areas received about 58 percent of the national income payments in 1939 and contained about 48 percent

FIGURE 3

# Geographic Distribution of Canned Citrus Juices Sales of Four Associations and National Income, 1938-39\*



\* National Income, 1939



of the population. As juices are used more by the higher-income groups, it seems natural that there should be a better market for citrus juices in these areas.

Only one association in this group, No. 33, reported distribution in each of the geographic areas. Its percentage distribution matched fairly well the percentage distribution of the national income, although the quantities sold relative to income were high.

Table 27.- Canned Citrus Juice: Sales of Four Associations by Geographic Areas, 1938-39 Season <sup>1/</sup>

Geographic area	Percentage of sales in area by association number -					Percentage of national income in area <sup>4/</sup>
	32	30 <sup>2/</sup>	29	33 <sup>3/</sup>	Total	
	Percent	Percent	Percent	Percent	Percent	
New England	16.3	-	23.3	10.2	12.6	8.1
Middle Atlantic	45.4	-	22.1	22.8	31.7	27.6
East North Central	17.4	-	5.9	17.8	16.2	22.2
West North Central	6.1	-	6.1	14.9	9.7	8.7
South Atlantic	5.9	-	6.6	2.6	4.1	10.2
East South Central	-	-	-	2.8	1.3	4.0
West South Central	-	-	.8	15.6	7.1	6.6
Mountain	-	4.6	12.2	3.6	2.2	2.9
Pacific	8.9	95.4	23.0	9.7	15.1	9.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1/</sup> Total domestic sales \$2,112,786. Includes one association packing a portion of grapefruit segments.

<sup>2/</sup> Data are for December 1938-November 1939, inclusive.

<sup>3/</sup> Data are for January 1939-December 1939, inclusive.

<sup>4/</sup> Calendar year 1939. U. S. Department of Commerce.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

in the West North Central and West South Central States. This may have been due to favorable transportation rates to those areas.

Association 30 distributed its products entirely in the Mountain and Pacific States, while association 32 marketed almost 80 percent of its products in the Middle Atlantic, East North Central, and New England States.

### Fruits

The principal markets for the group of eight associations packing primarily canned fruits are in the Middle Atlantic, New England, and East North Central States. When the percentage distribution of this group is compared with the percentage distribution of national income, sales have been relatively heavier in the New England and Middle Atlantic States and lighter in the East North Central States (table 28). Since five of these associations are located in the Pacific States, it may be somewhat surprising to see the heavy movement to the eastern seaboard. This may be accounted for by two factors; namely, low water transportation rates and high grades of products not usually packed in the eastern States.

Two of these associations, 34 and 19, are getting national distribution of their pack to a greater extent than the others in this group. Both organizations have ready access to water transportation. One is located on the west coast, while the other is on the east coast. It will be observed that association 34 is getting distribution more nearly matching national income than is 19.

Associations 12 and 14, both located on the west coast, are getting wide distribution of their packs. Both organizations appear to have developed certain markets more extensively than others when judged by the index of national income. However, the variety of products packed, some of which are only produced commercially in restricted areas in the Pacific States, may have been an important factor in determining their distribution.

Two small associations in this group, 16 and 13, were getting restricted distribution. Since one was located on the west coast and the other on the east coast, and each had a small volume to market, this probably accounts for the concentration of sales largely in the respective areas.

### Vegetables

Three of the four associations packing canned vegetables shown in table 29 are located in the Central States; one is located in the Mountain States. The number of commodities packed is small and the total volume of United States sales for the four associations was \$293,790 for the 1938-39 season. The distribution of sales is localized. Two of the associations were each reaching only two geographic areas; one was reaching four areas, while one was selling in five areas. Associations 8 and 9 were located in adjoining States and were packing about the same commodity. In the case of association 9, 95 percent of its distribution of sales is in the West North Central area, while association 8 was reaching that

Table 28.—Canned Fruits: Sales of Eight Associations, by Geographic Areas, 1938-39 Season 1/

Geographic area	Percentage of sales in area by association number —								Percent- age of national income in area 2/
	18	16	14	13 3/	15	19	12	3 1/4	
Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
2/	2.4	4.7	33.7	3.6	5.5	9.1	22.6	14.6	8.1
New England	6.6	20.5	54.2	29.4	32.9	37.4	42.2	34.2	37.0
Middle Atlantic	13.8	12.2	11.7	27.1	17.9	16.4	6.7	12.0	11.9
East North Central	14.9	18.9	12.2	9.8	17.1	13.0	2.1	5.6	7.5
West North Central	8.5	—	2.9	—	.8	1.5	.2	9.4	5.7
South Atlantic	6.7	—	.5	—	—	1.1	.4	2.4	1.7
East South Central	49.5	—	2.8	—	7.3	4.7	3.2	6.2	6.8
West South Central	—	12.2	1.2	—	7.2	3.7	5.6	1.8	2.8
Mountain	—	33.8	9.8	—	13.2	16.7	30.5	5.8	2.9
Pacific	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	9.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic sales \$4,586,069.52.

2/ Less than 0.05 percent.

3/ Data are for 1937-38 season.

4/ Percentages established for geographic areas on basis of cases sold, as furnished on form BA-H-3. These percentages were then applied to gross billings in dollar value for 1938-39 as furnished on form BA-H-2.

5/ Calendar year 1939. U. S. Department of Commerce.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

market with 22 percent of its sales. While this analysis does not justify the conclusion that the association with the more restricted distribution was doing a less effective job than its neighbor, it does suggest the desirability of a reexamination of the market possibilities in the light of what other associations with similar characteristics are doing.

Table 29.- Canned Vegetables: Sales of Four Associations by Geographic Areas, 1938-39 Season 1/

Geographic area	Percentage of sales in area by association number -					Percent- age of national income in area 3/
	5 2/	7	9	8	Total	
	Percent	Percent	Percent	Percent	Percent	
New England	-	-	-	-	-	8.1
Middle Atlantic	-	-	-	5.5	1.1	27.6
East North Central	-	34.7	5.4	57.9	22.7	22.2
West North Central	-	8.6	94.6	22.1	26.9	8.7
South Atlantic	-	-	-	-	-	10.2
East South Central	-	19.1	-	.4	5.6	4.0
West South Central	-	37.6	-	14.1	13.6	6.6
Mountain	26.1	-	-	-	7.8	2.9
Pacific	73.9	-	-	-	22.3	9.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic sales \$293,790.74.

2/ Data are for October 1938-September 1939, inclusive.

3/ Calendar year 1939, U. S. Department of Commerce.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

#### Fruits and Vegetables

Of this group of four associations packing both fruits and vegetables, three appeared to be getting regional distribution in practically all geographic areas while one was more restricted with respect to its sales. The total United States sales for the group for the 1938-39 season was \$4,080,255 (table 30). All four associations were located in the Pacific States. For the group as a whole the Pacific States lead with 31 percent of the United States sales. The Middle Atlantic States ranked second with 27.5 percent of the sales. The percentage of sales made in the Middle Atlantic area was nearly identical with the percentage of national income for the area, while the percentage of sales in the Pacific area was more than three times the percentage of national income in that area. This situation, no doubt, reflects to some extent differences in transportation costs.

Associations 22 and 25, both important packers of fruits, with vegetables of secondary importance, were well represented with their products getting wide distribution in the principal geographic areas. Association 25 made greater use of the Pacific markets with a corresponding reduction of sales in the Atlantic markets.

Table 30.- Canned Fruits and Vegetables: Sales of Four Associations by Geographic Areas, 1938-39 Season 1/

Geographic area	Percentage of sales in area by association number -					Percent- age of national income in area 4/
	21	23	25 2/	22 3/	Total	
	Percent	Percent	Percent	Percent	Percent	
New England	1.3	4.9	9.5	5.2	7.0	8.1
Middle Atlantic	24.4	19.6	18.4	45.7	27.5	27.6
East North Central	1.4	10.7	14.9	22.2	15.6	22.2
West North Central	5.7	17.3	9.2	4.7	8.1	8.7
South Atlantic	.2	.9	6.9	4.4	5.0	10.2
East South Central	-	.6	5/	1.0	.4	4.0
West South Central	1.8	5.2	1.2	4.2	2.5	6.6
Mountain	16.1	1.4	1.5	1.4	2.8	2.9
Pacific	49.1	39.4	38.4	11.2	31.1	9.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic sales \$4,080,255.39.

2/ Includes sales of cold pack, canned, and frozen.

3/ Data are for 1939-40 season.

4/ Calendar year 1939. U. S. Department of Commerce.

5/ Less than 0.05 percent.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Associations 21 and 23, located in the same State, were each making close to one-half their total sales in the Pacific markets. Sales to the Middle Atlantic and New England markets were running 10 points under those markets when judged by national income payments.

#### Dairy and Poultry Products

The three associations in this group are all located in the Pacific States (table 31). Their United States sales totaled \$3,377,771 in the 1938-39 season. From one-half to 97 percent of their United States sales were in the Pacific States. The canned products of the dairy associations were evaporated milk. The poultry association packed a varied line of poultry and related products.

Because of the limited number of organizations in this group, discussion is restricted to avoid revealing the identity of the individual associations.

#### FUTURE SALES AND SEASONAL DOLLAR BILLINGS

As most associations have ample warehouse space available for storing their products until buyers were willing to accept shipments, the monthly dollar billings may be accepted as some indication of the market demand of wholesalers. However, there may be and frequently is a marked lag between sales and billings. Storage costs at country points are less than at markets. Where country storage is available, it generally is economical to store at country points.

Table 31.- Canned Dairy and Poultry Products: Sales of Three Associations by Geographic Areas, 1938-39 Season 1/

Geographic area	Percentage of sales in area by association number -				Percent- age of national income in area 4/
	2	1	4	Total	
	Percent	Percent	Percent	Percent	
New England	-	2/ 1.1	9.2	2.3	8.1
Middle Atlantic	-	2/ 1.1	25.4	5.4	27.6
East North Central	-	-	8.2	1.6	22.2
West North Central	-	-	3/	3/	8.7
South Atlantic	-	-	4.6	.9	10.2
East South Central	-	-	-	-	4.0
West South Central	-	2.1	.3	1.0	6.6
Mountain	2.8	5.3	2.6	4.0	2.9
Pacific	97.2	90.4	49.7	84.8	9.7
Total	100.0	100.0	100.0	100.0	100.0

1/ Total domestic sales \$3,377,771.70.

2/ Eastern sales prorated to New England and Middle Atlantic States.

3/ Less than 0.05 percent.

4/ Calendar year 1939. U. S. Department of Commerce.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

The wholesale-grocer and chain-store distributors generally prefer to keep their inventories low in relation to sales. This causes the billings of canners to correspond closely with seasonal movement in retail distribution. Retail distribution might be expected to reflect rather closely consumers' demand for the product, and such is probably the case with most canned goods.

Consumers generally make purchases in small quantities, in accordance with their needs for current consumption, although the product is nonperishable and can be carried on pantry shelves or in home storages for indefinite periods without deterioration.

Cooperatives do, however, follow the practice of making sales on future contracts with shipments to follow in accordance with conditions specified in the contract. Future sales, as used in this section, refer to sales made prior to packing the product. Of 34 associations reporting on this practice, about 15 percent made no future sales (table 32), while an equal percentage made future sales on from 51 to 75 percent of their total sales. However, the great majority of cooperatives make less than half of their sales on future contracts; 29 percent reported from 1 to 25 percent of their sales as future sales.

Table 32.—Percentage of Dollar Sales Made on Future Contracts

Percentage of dollar sales	Number of associations handling -					Percent-age of all associations	
	Dairy and poultry	Vege-tables	Fruits	Fruits and vege-tables	Spe-cial-ties		
None	2	1	-	-	2	5	14.7
1 - 25 percent	2	4	1	-	3	10	29.4
26- 50 percent	-	2	4	4	3	13	38.3
51- 75 percent	-	-	1	3	1	5	14.7
76- 100 percent	-	-	1	-	-	1	2.9
Total	4	7	7	7	9	34	100.0

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Less use of the future contract is made by the dairy and poultry group, while greater use is made by the group packing fruits and vegetables.

Although sales are frequently made prior to pack, actual shipment may follow weeks or months later. With products such as juices, which are subject to wide variations in seasonal use and demand, billings might be expected to reflect the seasonal changes in demand.

### Citrus Juices

The data in table 33 (fig. 4) show the percentage of monthly dollar billings for five associations whose combined total United States sales of citrus juices were \$3,117,267 for 1939. Billings were greatest for the 4 months of May, June, July, and August, with monthly billings ranging from 10.5 to 14 percent of the total for 12 months. It will be noted that each of the four associations was shipping heavily during these hot months. Total shipments were lowest in November, when less than 3 percent of the total shipments during the year were billed.

### Fruits

Of the eight associations primarily engaged in canning fruits and berries, whose billings are shown in table 34, five are located in the Pacific States, two in the Great Lakes region, and one in the New England States. Their total United States billings for the 1938-39 season were \$3,098,887.

Table 33.— Canned Citrus Juices: Seasonal Dollar Billings of Five Associations for 1939 1/

Month	Percentage of billings during month by association number -					
	28	33	29	30	32	Total
	Percent	Percent	Percent	Percent	Percent	Percent
January	4.7	4.5	5.2	11.1	6.0	5.5
February	5.3	12.5	4.1	11.5	6.6	8.6
March	6.6	14.0	8.5	4.9	4.3	8.3
April	5.4	6.5	5.1	9.8	6.0	6.2
May	5.9	8.6	11.2	12.5	13.6	10.5
June	10.9	9.8	8.1	6.1	19.5	13.7
July	13.8	12.0	14.3	8.5	16.9	14.2
August	16.9	11.7	10.7	8.8	12.4	12.7
September	9.7	8.0	13.4	4.8	8.8	8.6
October	7.8	6.3	9.3	7.3	3.6	5.5
November	7.1	3.1	5.3	4.2	.2	2.7
December	5.9	3.0	4.8	10.5	2.1	3.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic billings \$3,117,267.91. Includes one association packing a portion of grapefruit segments.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

FIGURE 4

Canned Citrus Juices: Average Seasonal Dollar Billings of 5 Associations Compared with 2 Associations, 1939

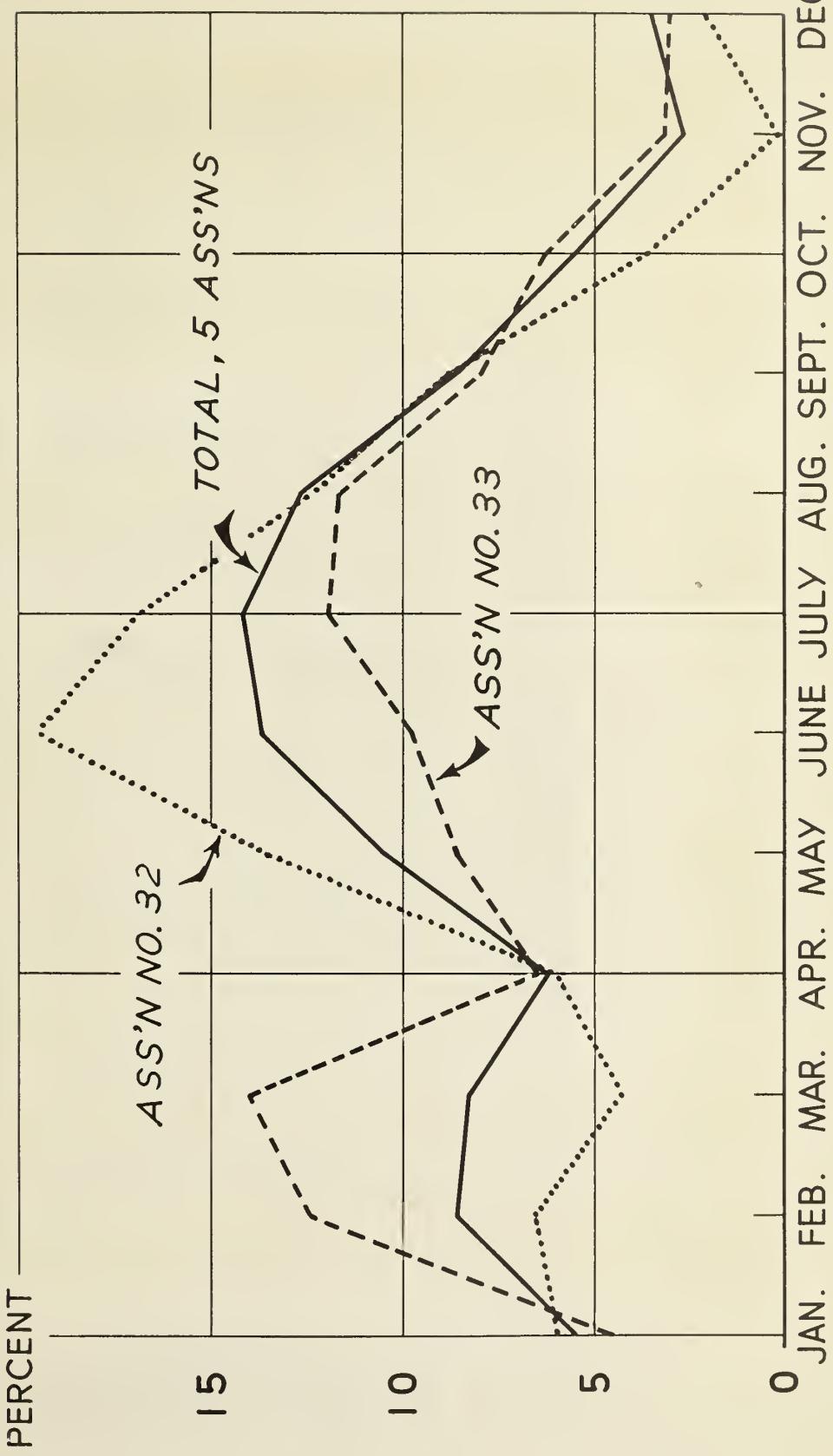




Table 34.-Canned Fruits: Seasonal Dollar Billings of Eight Associations, 1938-39 1/

Month	Percentage of billings made during month by Association number -						Total Percent
	17 Percent	18 Percent	16 Percent	14 Percent	13 Percent	15 Percent	
June 2/11.5	17.9	13.5	7.3	3.9	7.2	19.6	12.2
July 12.2	2/1.1	9.6	18.1	1.2	12.1	10.4	11.6
August 9.7	2/1.1	4.1	9.8	4.5	2.5	5.0	8.0
September 6.7	4.4	3.2	9.3	3.6	4.6	3.5	5.8
October 4.2	6.2	6.6	6.5	12.6	5.5	10.5	8.0
November 2.8	13.1	12.8	4.2	21.0	3.4	6.5	11.1
December 3.8	1.2	6.9	6.6	7.0	6.0	6.6	4.1
January 6.1	10.9	2.3	4.9	9.4	5.7	8.2	5.6
February 15.8	26.2	2.0	9.4	1.4	11.7	7.8	4.4
March 11.1	20.7	5.8	8.9	12.0	12.6	14.8	9.8
April 10.5	6.5	9.4	4.2	15.2	25.7	5.2	10.7
May 5.6	8.1	20.6	4.6	13.3	11.2	7.9	6.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic billings \$3,098,887.33.

2/ June 1939

3/ Combined billings for two months prorated equally to July and August.  
Source: Survey made by the Cooperative Research and Service Division, 1939-40.

For the group as a whole, which is heavily weighted with associations located in the Pacific Northwest, the seasonal movement was greatest in June and July, and again in February, March, and April. The months when billings were lowest were December and January. The billings of several Pacific Northwest associations included their frozen pack of fruits and berries. Inclusion of frozen products in the billings of these associations probably accounts for the heavy seasonal movement in June and July for a number of these associations. For example, association 19 packs quantities of frozen products, which accounts for heavy shipments in June and July. It also is an extensive packer of a number of lines of canned fruits whose seasonal movement varies from that of its frozen pack.

Associations 13 and 15 pack almost exclusively canned fruits. One is located in New England, while the other is in the Pacific Northwest. Association 13 ships heavily upon completion of its pack in October and November and again in the spring months, while association 15 had its heavy movement from January to May.

For associations 17 and 18, which are located in the Great Lakes region and are packing similar products, there is a marked variation in seasonal billings. Association 18 was shipping practically nothing in June and July, while association 14 was making heavy shipments. Both organizations had a heavy movement in February, March, and April.

Care should be exercised not to place too much dependence upon the sales experience of a single season by a comparatively small percentage of the total canneries in the United States because seasonal movement, no doubt, is influenced materially by carry-over, prospective supplies, and conditions of demand. The effects of some of these factors may be noted in the succeeding tables and discussion.

#### Fruits and Vegetables

The 3-year experience of this group of five large packers all located in the Pacific States, and whose total United States billings average slightly over \$6,000,000 annually, shows very definitely the heavy seasonal movement occurring each year during August, September, and October at the close of the principal packing season (table 35). Lighter movements occurred during April, May, and June, and again during November, December, and January.

An increase in shipments was made each season in February or March, which may have resulted from increased sales activity following the annual meeting of the canning trade organization in January of each year and restocking by wholesale buyers following the holiday and inventory season.

Table 35.-Canned Fruits and Vegetables: Seasonal Dollar Billings of Five Associations, 1936-37 to 1938-39 1/

Month	Percentage of billings during month by association number -					
	20	22	23	25	21	Total
<u>1936-37:</u>	Percent	Percent	Percent	Percent	Percent	Percent
June	2.6	3.8	4.5	2.8	-	3.0
July	5.8	10.4	14.2	11.2	-	9.0
August	11.8	23.3	6.4	17.5	-	15.2
September	15.2	20.7	11.9	10.9	-	14.3
October	12.4	11.3	9.8	13.1	-	12.3
November	2.8	.7	5.3	4.8	-	3.3
December	4.2	1.3	3.9	4.3	-	3.8
January	7.8	2.3	6.0	6.6	-	6.4
February	10.4	8.3	8.1	14.3	-	11.2
March	15.6	3.1	14.9	4.1	-	9.6
April	7.2	6.3	8.0	5.5	-	6.5
May	4.2	8.5	7.0	4.9	-	5.4
Total	100.0	100.0	100.0	100.0	-	100.0
<u>1937-38:</u>						
June	6.1	2.0	3.9	7.9	.8	5.3
July	5.1	5.3	13.0	10.8	1.6	6.9
August	9.8	13.0	9.3	12.8	13.9	11.5
September	13.5	14.8	10.8	12.1	15.1	13.3
October	11.5	16.7	6.7	16.1	18.9	14.1
November	6.9	5.7	14.5	6.3	9.0	7.1
December	8.5	9.5	6.8	4.9	7.2	7.5
January	11.0	8.3	7.8	3.9	7.2	8.0
February	6.5	8.6	7.9	6.2	6.0	6.9
March	13.1	5.4	6.3	10.1	7.3	10.0
April	4.6	5.6	6.5	4.5	8.1	5.1
May	3.4	5.1	6.5	4.4	4.9	4.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
<u>1938-39:</u>						
June	4.5	5.8	5.5	5.3	6.6	5.1
July	7.5	4.5	16.9	9.3	6.5	8.0
August	9.1	22.5	6.5	6.5	11.5	10.9
September	12.4	15.7	4.6	6.1	8.1	10.6
October	10.0	12.0	6.9	14.7	14.6	11.7
November	6.3	7.6	6.0	7.4	6.2	6.8
December	6.2	5.2	4.2	9.8	4.9	6.8
January	10.2	5.1	6.8	5.9	3.7	7.6
February	4.4	5.9	6.2	10.2	7.9	6.6
March	14.6	4.7	15.4	12.5	12.2	12.0
April	8.7	5.5	10.2	4.2	8.5	7.0
May	6.1	5.5	6.8	3.1	9.3	6.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

1/ Total domestic billings - 1936-37, \$6,124,339; 1937-38, \$5,478,497; 1938-39, \$6,701,587.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

Associations 20 and 22, located in the same State and packing a similar line, show much the same seasonal movement for each of the 3 years. Associations 23 and 21, also each located in another State and packing similar lines, experience much the same seasonal movement.

While the organizations included in this group very properly may be classed as packers of fruits and vegetables, the major portion of their pack usually consists of fruits, which form the bulk of their shipments, although one association, 21, could have been classed with the vegetable group since a majority of its pack is vegetables.

#### Vegetables

The four associations in this group packing a line of vegetables had annual billings averaging close to \$1,000,000 for the 3-year period shown in table 36. Three of these associations were located in the Central States, while one was located on the Atlantic Seaboard. For the group as a whole seasonal billings usually have been heaviest immediately following the packing season.

For the 1936-37 pack, shipments moved freely during the first half of the marketing year. For the year 1937-38, shipments were made at a slower rate during the first half of the marketing year. During the 1938-39 marketing year, shipments proceeded at an even slower rate during the first half of the year than in either 1936-37 or in 1937-38.

When seasonal billings for the individual associations are examined, it will be observed that the rate of marketing for three of the associations was decidedly variable. For one association, the rate was more uniform and it was making substantial shipments each month for the 3-year period. This association, 6, was following a merchandising plan designed to feed the market and keep its products moving fairly evenly throughout the entire year.

#### SEASONAL BILLINGS AS RELATED TO VOLUME

Canneries with large volume tend to distribute their shipments more evenly throughout the marketing season than canneries with small volume. This is shown by the examination of the data for the 1938-39 season for the three-volume classifications given in table 37. For the 1938-39 season dollar billings of six small associations, marketing products of less than \$100,000 in value, there were 4 months in which billings exceeded 10 percent as compared to 3 months in which they exceeded 10 percent in the intermediate-size group, and 2 months in which billings exceeded 10 percent in the large-size group.

Table 36. - Canned Vegetables: Seasonal Dollar Billings of Four Associations,  
1936-37 to 1938-39 1/

Month	Percentage of billings during month by association number -				
	6	7	8	9	Total
1936-37:	Percent	Percent	Percent	Percent	Percent
June	7.0	-	-	15.2	7.9
July	11.4	-	-	17.6	12.0
August	11.3	-	11.3	30.3	13.6
September	9.3	-	16.0	15.8	10.2
October	11.7	-	33.8	7.0	11.5
November	5.7	-	-	1.6	5.1
December	7.2	-	-	-	6.2
January	6.4	-	24.5	2.0	6.1
February	10.3	-	-	5.9	9.6
March	7.9	-	4.4	1.9	7.1
April	5.5	-	9.9	2.7	5.2
May	6.3	-	.1	-	5.5
Total	100.0	-	100.0	100.0	100.0
1937-38:	Percent	Percent	Percent	Percent	Percent
June	9.1	-	-	.6	7.1
July	7.1	-	2/	6.3	6.5
August	4.0	-	2/	18.3	6.1
September	15.6	-	22.1	13.8	15.7
October	11.2	-	15.9	24.8	13.8
November	8.6	-	2/	4.9	7.5
December	7.4	-	.4	3.3	6.3
January	11.5	-	2/	5.6	9.8
February	4.7	-	9.3	5.0	5.0
March	7.2	-	9.2	6.6	7.3
April	9.7	-	28.9	7.8	10.5
May	3.9	-	14.2	3.0	4.4
Total	100.0	-	100.0	100.0	100.0
1938-39:	Percent	Percent	Percent	Percent	Percent
June	5.4	4.1	5.8	12.4	5.9
July	5.8	.5	4.5	12.2	5.7
August	4.9	.1	1.5	6.4	4.2
September	9.3	8.2	.1	5.3	8.1
October	14.7	22.0	.1	8.8	13.9
November	6.9	20.6	.2	4.8	7.7
December	7.1	5.4	8.7	3.4	6.7
January	7.7	12.1	6.4	7.2	8.1
February	10.9	9.7	5.7	5.3	9.9
March	10.2	3.5	14.1	8.1	9.6
April	7.6	10.0	32.0	14.1	10.3
May	9.5	3.8	20.9	11.7	9.9
Total	100.0	100.0	100.0	100.0	100.0

1/ Total domestic billings - 1936-37, \$1,268,821.18; 1937-38, \$799,068.88;  
1938-39, \$748,894.33.

2/ Less than 0.05 percent.

Source: Survey made by the Cooperative Research and Service Division,  
1939-40.

Table 37. - Seasonal Dollar Billings of Associations Marketing less than \$100,000 worth of products, \$100,000 to \$500,000 worth, and \$750,000 to \$1,500,000 worth for 1938-39.

Month	Percentage of billings during month by association number -							
	16 Percent	13 Percent	29 1/ Percent	7 Percent	8 Percent	30 1/ Percent	Total Percent	
Six associations marketing under \$100,000								
June	17.9	7.3	5.2	4.1	5.8	11.1	8.4	
July	9.6	1.2	4.1	.5	4.5	11.5	6.3	
August	4.1	4.5	8.5	.1	1.5	4.9	4.0	
September	3.2	3.6	5.1	8.2	.1	9.3	6.4	
October	6.6	12.6	11.2	22.0	.1	12.5	12.0	
November	12.8	21.0	8.1	20.6	.2	8.1	10.0	
December	6.9	7.0	14.3	5.4	8.7	8.5	9.7	
January	2.3	.9	10.7	12.1	6.4	8.8	8.3	
February	2.8	1.4	13.4	9.7	5.7	4.8	6.9	
March	3.8	12.0	9.3	3.5	14.1	7.3	7.9	
April	9.4	15.2	5.3	10.0	32.0	4.2	10.4	
May	20.6	13.3	4.8	3.8	20.9	10.5	10.7	
Total 2/	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Association number -								
Seven associations marketing \$100,000-\$500,000	18 Percent	15 Percent	9 Percent	17 Percent	23 Percent	21 Percent	27 Percent	
June	.5	3.9	12.4	11.5	5.5	6.6	7.3	6.7
July	3/ 1.1	7.2	12.2	12.2	16.9	6.5	6.6	9.7
August	3/ 1.1	2.5	6.4	9.7	6.5	11.5	10.8	7.5
September	4.4	4.6	5.3	6.7	4.6	8.1	13.6	6.8
October	6.2	5.5	8.8	4.2	6.9	14.6	11.8	8.1
November	13.1	3.4	4.8	2.8	6.0	6.2	5.6	5.7
December	1.2	6.0	3.4	3.8	4.2	4.9	12.9	5.2
January	10.9	5.7	7.2	6.1	8.8	3.7	6.9	6.8
February	26.2	11.7	5.3	15.8	6.2	7.9	9.2	11.8
March	20.7	12.6	8.4	11.1	15.4	12.2	6.3	12.8
April	6.5	25.7	14.1	10.5	10.2	8.5	2.8	10.7
May	8.1	11.2	11.7	5.6	8.8	9.3	6.2	8.2
Total 4/	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Association number -								
Five associations marketing \$750,000-\$1,500,000	12 Percent	22 Percent	33 1/ Percent	32 1/ Percent	2 Percent	Total Percent		
June	19.6	5.8	4.5	6.0	9.9	8.9		
July	10.4	4.5	12.5	6.6	9.8	8.8		
August	11.3	22.5	14.0	4.3	8.2	11.2		
September	3.5	15.7	6.5	6.0	7.2	7.8		
October	10.6	12.0	8.6	13.6	8.1	10.1		
November	11.1	7.6	9.8	19.5	6.5	9.9		
December	4.1	5.2	12.0	16.9	9.4	9.7		
January	3.2	5.1	11.7	12.4	6.8	7.7		
February	4.4	5.9	8.0	8.8	8.0	7.4		
March	6.6	4.7	6.3	3.6	9.5	6.9		
April	10.2	5.5	3.1	.2	7.3	5.5		
May	5.0	5.5	3.0	2.1	9.3	6.0		
Total 5/	100.0	100.0	100.0	100.0	100.0	100.0		

1/ Calendar year.

2/ Total domestic billings \$442,807.37.

3/ Combined billings for the two months prorated equally to July and August.

4/ Total domestic billings \$2,021,018.82.

5/ Total domestic billings \$7,622,480.38.

Source: Survey made by the Cooperative Research and Service Division, 1939-40.

To make the statement in a slightly different way, in the small-size group the range in billings from the low to the high month was 8 percent as compared to 7.6 percent for the intermediate group and 5.7 percent for the large-size group. Thus, as the volume size of the group increased, the range in monthly billings decreased.

Further examination of the billings by individual associations for each of the size groups shows that the small-size group contained one association for which 32 percent of its billings for the season were made in 1 month as compared to 26.2 percent for the intermediate group and 22.5 percent for the large-size group.

## APPENDIX A

## Location of Cooperative Canneries Included in this Study

<u>Code Number</u>	<u>Location</u>
<u>Dairy and poultry associations:</u>	
1	Pacific and Mountain
2	" " "
3	E. N. Central, W. N. Central, E. S. Central and
4	W. S. Central
4	Pacific and Mountain
<u>Vegetable associations:</u>	
5	Pacific and Mountain
6	New England, Middle Atlantic and South Atlantic
7	E. N. Central, W. N. Central, E. S. Central and W. S. Central
8	E. N. Central, W. N. Central, E. S. Central and W. S. Central
9	E. N. Central, W. N. Central, E. S. Central and W. S. Central
10	Pacific and Mountain
11	New England, Middle Atlantic and South Atlantic
<u>Fruit associations:</u>	
12	Pacific and Mountain
13	New England, Middle Atlantic and South Atlantic
14	Pacific and Mountain
15	" " "
16	" " "
17	E. N. Central, W. N. Central, E. S. Central and W. S. Central
18	E. N. Central, W. N. Central, E. S. Central and W. S. Central
1/ 19	Pacific and Mountain
<u>Fruit and vegetable associations:</u>	
20	Pacific and Mountain
21	" " "
22	" " "
23	" " "
24	E. N. Central, W. N. Central, E. S. Central and W. S. Central
25	Pacific and Mountain
26	" " "
<u>Associations marketing specialties 2/:</u>	
27	New England, Middle Atlantic and South Atlantic
28	Pacific and Mountain
29	" " "
30	" " "

1/ Data available only for distribution and seasonal billings in tables 26, 27, 29, and 35.

2/ Includes associations primarily canning fruit juices, syrup, mushrooms and cranberry sauce.

Location of Cooperative Canneries Included in this Study (Cont'd.)

<u>Code Number</u>	<u>Location</u>						
31	E. N. Central, W. N. Central, E. S. Central and W. S. Central						
32	New England, Middle Atlantic and South Atlantic						
33	E. N. Central, W. N. Central, E. S. Central and W. S. Central						
34	New England, Middle Atlantic and South Atlantic						
35	"	"	"	"	"	"	"
36	"	"	"	"	"	"	"
37	"	"	"	"	"	"	"
38	"	"	"	"	"	"	"



Coop. Agric. Econ. Li  
Distribution of canned  
Fishes (in U.S.)

S. S. R. R.

Wr. 33

S. S. R. R.



